

AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawing includes a change to Fig. 1 and replaces the original sheet depicting Fig. 1.

FIG. 1 has been labeled "Prior Art"

Attachment: Replacement Sheet (Fig. 1)

REMARKS

Reconsideration of the present application is requested.

The present invention relates to a tire with radial carcass reinforcement, intended for equipping a heavy vehicle such as a transport vehicle or construction machinery. The aim of the invention is to define a crown structure which allows a satisfactory service life to be obtained, in particular by improving the circumferential and transverse stiffness values in order to restrict the shear stresses while maintaining the flexibility of the crown.

This aim has been achieved according to the invention by a working crown reinforcement composed of at least two continuous working crown plies formed by metal reinforcing elements which cross from one ply to the next, forming angles α , α' of between 10° and 35° with the circumferential direction. The working crown reinforcement is completed on each side of the tire's circumferential center plane by at least two half-ply, wherein the metal reinforcing elements form angles β , β' with the circumferential direction that are greater than the smallest of the angles α , α' . Axially outer ends of the half-ply are not radially aligned (e.g., see the axially outer ends of the half-ply 19, 20 in the embodiment disclosed in connection with Fig. 20). Moreover, the half-ply which extends the farthest axially outwardly is in contact with the axially widest continuous working crown ply. Also, the two half-ply radially cover the axially outer end of the axially widest working ply.

That combination of features, now recited in claim 1, is not disclosed or taught by the prior art applied against the claims. In particular, the Official action relied upon Figs. 4a and 4b of Nakano et al. In Fig. 4a there is disclosed a single half-ply 8, and in Fig. 4b there are disclosed two half-ply 13 whose axially outer ends are

radially aligned. Neither of those embodiments includes half-ply whose axially outer ends are not radially aligned as recited in claim 1 (e.g., see column 6, lines 57-59 of Nakano et al.)

Moreover, in the embodiments of Nakano et al. where the axially outer ends are not radially aligned, i.e., in Figs. 4c and 4d, Nakano et al. teach that the half-ply 13 which extends farthest axially outwardly is not in contact with the axially widest working crown ply, in contrast to the recitation in present claim 1. Thus, Nakano et al. should be considered as teaching away from the presently claimed invention.

For those reasons, it is submitted that claim 1 distinguishes patentably over Nakano et al.

Furthermore, applicants take issue with the assertion made in section no. 5 of the Official action that both of the half-ply 13 in Fig. 4b of Nakano et al. could comprise steel cords. Nakano et al. specifically discloses that the half-ply 13 comprise nylon cords. Nakano et al. was well aware of the use of steel cords in a half-ply since they disclose such in connection with the single half-ply 8 of Fig. 4b. Regardless, Nakano et al. specify nylon when employing two half-ply. Thus, it is submitted that Nakano et al. further teach away from the presently claimed invention.

A Substitute Declaration is hereby submitted and which complies with the requirements set by MPEP § 602.

In light of the foregoing, it is submitted that the application is in condition for allowance.

Respectfully submitted,

BUCHANAN INGERSOLL PC

Date: October 26, 2005

By:


Alan E. Kopecki
Registration No. 25,813

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620